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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/837,008	04/18/2001	Terry E. Flach	VITLCOM.30DC1D	1072

7590 01/26/2007  
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EXAMINER
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TSEGAYE, SABA

ART UNIT	PAPER NUMBER
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2616

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/26/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

09/837,008

Applicant(s)

FLACH ET AL.

Examiner

Saba Tsegaye

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 41-46 and 57-90 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 41-46 and 57-90 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>04/30/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement filed 04/18/2001 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

In particular the following have not been received:

- 1) 2,258,960 02/24/93 Great Britain
- 2) Product brochure titled "Wireless Connectivity by Pacific Communications, Inc.", 1993. International Search Report, dated October 21, 1997.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Regarding claims 43 (lines, 4, 5 and 7) and 44 (line 2), the phrase "or the like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or the like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 41, 42, 62, 65, 69, 70, 72, 75 and 77 are rejected under 35 U.S.C. 102(e) as being anticipated by Drakopoulos et al. (US 5,506,848).

Regarding claim 41, Drakopoulos discloses, in figs. 1 and 2, a communications system which supports the mobility of wireless communications devices throughout a building (wireless system 102; column 1, lines 21-23), comprising:

at least one centralized computer (104; column 4, lines 10-20; column 1, lines 21-26);

a plurality of RF transceivers (RDP 106) connected to the at least one centralized computer (104), the RF transceivers distributed throughout the building such that different transceivers provide coverage for different regions of the building, at least some of the RF transceivers of the plurality transmitting and receiving data on different RF channels (column 3, lines 23-29); and

a plurality of wireless communications devices (216) which communicate bi directionally with the at least one centralized computer (104) via the plurality of RF transceivers (106), the plurality of wireless communications devices (216) communicating with the RF transceivers using a wireless time division multiple access protocol, the wireless TDMA protocol including a switchover protocol in which the wireless communications devices connect to different RF

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transceivers of the plurality based on assessments of RF link conditions (column 11, lines 35-57) between individual wireless communications device and individual RF transceivers, the wireless TDMA protocol thereby supporting the mobility of the wireless communications device between the different regions of the building (column 3, lines 54-65).

Regarding claim 42, Drakopoulos discloses the communications system, wherein the assessments of the RF link conditions are made by the wireless communications devices (column 7, lines 24-31; column 11, lines 44-57).

Regarding claims 62 and 77, Drakopoulos discloses the communications system wherein at least some of the wireless communications devices transmit digitized waveform data to the centralized computer (column 20, lines 30-36).

Regarding claim 65, Drakopoulos discloses a plurality of radio frequency transceiver (106) units connected to a wired computer network (104) to provide wireless access points to the wired computer network (see fig. 2), the RF transceiver units spatially distributed throughout area of the building to provide multiple coverage zones (column 1, lines 21-26); and a plurality of wireless communications devices (216) communicate by wireless communications with the plurality of RF transceiver units (106) according to a wireless TDMA protocol in which the RF transceiver units assign timeslots to the wireless communications devices (column 2, lines 5-16); wherein the wireless communications devices (216) and the RF transceiver (106) units implement a switch-over protocol in which a wireless communications device connects to and

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disconnects from specific RF transceiver units of the plurality of RF transceiver units to maintain general connectivity to the wired computer network as the wireless communications device is moved across the multiple coverage zones (column 3, lines 54-65; column 11, lines 44-57).

Regarding claim 69, Drakopoulos discloses a communications system wherein at least one of the wireless communications devices attempts to maintain wireless connections with at least two of the RF transceiver units at a time to provide redundant transmission paths for conveying data to the computer network (column 7, lines 24-31).

Regarding claim 70, Drakopoulos discloses a communications system wherein each RF transceiver unit operates on one of multiple wireless channels and the wireless communications devices switch between the multiple wireless channels to switch between RF transceiver units (column 3, lines 55-65).

Regarding claim 72, Drakopoulos discloses a communications system wherein each wireless communication device monitors the multiple wireless channels to make assessments of wireless link conditions offers by specific RF transceiver units and uses the assessments to select RF transceiver units with which to establish wireless connections (column 5, lines 55-67).

Regarding claim 75, Drakopoulos discloses a communications system wherein each RF transceiver unit is capable of maintaining wireless connections with multiple wireless communications devices at a time (column 3, lines 55-65; column 4, lines 55-59).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 43, 44, 60, 61, 73 and 74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Drakopoulos in view of Padovani et al. (US 6,222,830 B1).

Regarding claims 43, 60, 61, 73 and 74, Drakopoulos discloses all the claim limitations as stated above, except selecting packets received from the different RF transceivers based upon error detection codes contained within the like packets.

Padovani et al. teaches that a selector element selects packets received from multiple base transceivers stations based upon frame quality (Abstract; column 8, lines 55-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the teachings from Padovani et al. of selecting packets received from the different RF transceivers based upon error detection codes in the system of Drakopoulos in order to provide a reliable communication system.

Regarding claim 44, Drakopoulos discloses the communications system wherein the at least one wireless communications device transmits the packets to the at least two RF transceivers on different respective RF frequencies (column 7, lines 24-31).

7. Claims 45 and 67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Drakopoulos et al. in view of Edmon et al. (US 6,813,277 B2).

Drakopoulos discloses all the claim limitations as stated above, except for the timeslot availability messages.

Edmon teaches that individual stations receive downstream broadcast messages indicating the status of each upstream time slot (column 2, lines 34-44).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the teachings from Edmon of broadcasting the availability of timeslot to wireless communications devices in to the system of Drakopoulos in order to provide an efficient and more economic use of channel by preventing interference between time slots.

8. Claims 57, 58, 68, 71, 79-81, 83, 86 and 90 are rejected under 35 U.S.C. 103(a) as being unpatentable over Drakopoulos et al. (US 5,506,848) in view of Wallerius et al. (US 6,192,038 B1).

Regarding claims 58, 68 and 71, Drakopoulos discloses all the claim limitations as stated above, except for a first and second RF transceivers being spaced apart and operate on the same RF channel to provide frequency reuse.

Wallerius teaches reuse of the same radio frequencies in designated co-user cells that are sufficiently separated by distance (column 2, lines 36-50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the teachings from Wallerius of reusing frequency in the system of Drakopoulos in order to provide radio frequency communication to large numbers of users.



Regarding claim 79, Drakopoulos discloses a communication system which supports the mobility of wireless communications devices within a building, comprising: a plurality of radio frequency transceiver units connected to a wired computer network to provide wireless access points to the wired computer network, the RF transceiver units mounted in spatial distribution within the building to provide multiple coverage zones, each RF transceiver unit assigned to a wireless channel of a set of wireless channels (212, 214); and a plurality of wireless communications devices that communicate by wireless communications with the plurality of RF transceiver units, each wireless communication device configured to switch between individual channels of the set of wireless channels to communicate with the RF transceiver units (column 3, lines 54-65); wherein the wireless communications devices and the RF transceiver units implement a switch-over protocol in which a wireless communications device connects to and disconnects from specific RF transceiver units of the plurality of RF transceiver units to maintain general connectivity to the wired computer network as the wireless communications device is moved across the multiple coverage zones (column 3, lines 54-65; column 11, lines 44-57); and wherein RF transceivers that are mounted within range of one another are assigned to different wireless channels of the set to avoid interference (see fig. 2; column 3, lines 60-65).

Drakopoulos does not expressly disclose at least two RF transceivers that are sufficiently spaced apart from each other to avoid interference are assigned to the same wireless channel to provide frequency reuse within the building.

Wallerius teaches reuse of the same radio frequencies in designated co-user cells that are sufficiently separated by distance (column 2, lines 36-50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the teachings from Wallerius of reusing frequency in the system of Drakopoulos in order to provide radio frequency communication to large numbers of users.

Regarding claims 57, 80 and 89, Drakopoulos discloses all the claim limitations as stated above, except for the RF channels that are frequency division multiplexed channels.

Wallerius teaches TDMA implementations that also employ FDMA techniques. Carriers are reused from cell to cell in an FDMA scheme, and each carrier, several channels are defined using TDMA methods (column 2, lines 54-61).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the teachings from Wallerius of FDM channels in the TDMA system of Drakopoulos in order provide wireless communication to large numbers of users.

Regarding claim 81, Drakopoulos discloses the communications system wherein the RF transceiver units communicate with the wireless communications devices according to wireless time division multiple access protocol (column 3, lines 54-65).

Regarding claim 83, Drakopoulos discloses the communication system wherein each wireless communications device monitors the set of wireless channels to make assessments of wireless link conditions offered by specific RF transceiver units, and uses the assessments to select RF transceiver units with to which to establish wireless connection (column 7, lines 24-31; column 11, lines 44-57).

Regarding claims 86 and 90, Drakopoulos discloses a communications system wherein each RF transceiver unit is capable of maintaining wireless connections with multiple wireless communications devices at a time (column 3, lines 55-65; column 4, lines 55-59).

9. Claim 59 is rejected under 35 U.S.C. 103(a) as being unpatentable over Drakopoulos et al. (US 5,506,848) in view of Abreu et al. (US 5,754,956).

Drakopoulos discloses all the claim limitations as stated above, except for wireless communications devices that use their respective catalogs to select RF transceivers.

Abreu teaches a radiotelephone handset receives a control channel from a plurality of base stations and stores all received control channel information in captured data buffer. The handset identifies as candidate suitable bas stations those base stations having acceptable received signal strength (see abstract; column 10, lines 1-26).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the teachings from Abreu of maintaining a catalog to select RF transceivers in the system of Drakopoulos in order to find the most suitable base station thereby minimizing battery depletion during the synchronization process.

10. Claims 63, 64, 66 and 78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Drakopoulos et al. (US 5,506,848) in view of Emerson et al. (US 4,775,996).

Regarding claims 63 and 66, Drakopoulos discloses all the claim limitations as stated above, except for RF transceivers that are mounted to a ceiling of the building.

Emerson teaches that RF transceivers are mounted to a ceiling of the building (column 3, lines 44-51).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the teachings from Emerson of mounting RF transceivers to a ceiling in to the system of Drakopoulos in order to avoid extensive floor-level work and thereby cutting labor and cost significantly.

Regarding claims 64 and 78, Drakopoulos discloses all the claim limitations as stated above, except for an algorithm for tracking real time locations of wireless communications devices.

Location and tracking systems are known. Therefor it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a system that uses an algorithm for tracking real time locations of wireless communications devises to the system of Drakopoulos in order to avoid delay and provide an efficient communication system.

11. Claims 46 and 76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Drakopoulos in view of Engira (5,152,584).

Drakopoulos discloses all the claim limitations as stated above, except for transmitting real time electrocardiograph waveform data of patients to the wired computer network.

Engira teaches an ECG telemetry system incorporating a patient location system and a method of monitoring physiological status of the patient (column 1, lines 50-column 2, line 26).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the teachings from Engira of transmitting real time electrocardiograph waveform data in the system of Drakopoulos in order to locate ambulatory patients experiencing arrhythmic episodes and monitoring physiological status of the patient (column 2, lines 3-9).

12. Claim 82 is rejected under 35 U.S.C. 103(a) as being unpatentable over Drakopoulos in view of Wallerius as applied to claim 79 above, and further in view of Edmon et al. (US 6,813,277 B2).

Drakopoulos in view of Wallerius discloses all the claim limitations as stated above, except for the timeslot availability messages.

Edmon teaches that individual stations receive downstream broadcast messages indicating the status of each upstream time slot (column 2, lines 34-44).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the teachings from Edmon of broadcasting the availability of timeslot to wireless communications devices in to the system of Drakopoulos in view of Wallerius in order to provide an efficient and more economic use of channel by preventing interference between time slots.

13. Claims 84 and 85 are rejected under 35 U.S.C. 103(a) as being unpatentable over Drakopoulos in view of Wallerius as applied to claim 79 above, and further in view of Padovani et al. (US 6,222,830 B1).

Drakopoulos in view of Wallerius discloses all the claim limitations as stated above, except selecting packets received from the different RF transceivers based upon signal strengths.

Padovani et al. teaches that a selector element selects packets received from multiple base transceivers stations based upon frame quality (Abstract; column 8, lines 55-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the teachings from Padovani et al. of selecting packets received from the different RF transceivers based upon error detection codes in the system of Drakopoulos in view of Wallerius in order to provide a reliable communication system.

14. Claim 88 is rejected under 35 U.S.C. 103(a) as being unpatentable over Drakopoulos in view of Wallerius as applied to claim 79 above, and further in view of Emerson et al. (US 4,775,996).

Drakopoulos in view of Wallerius discloses all the claim limitations as stated above, except for RF transceivers that are mounted to a ceiling of the building.

Emerson teaches that RF transceivers are mounted to a ceiling of the building (column 3, lines 44-51).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the teachings from Emerson of mounting RF transceivers to a ceiling in to the system of Drakopoulos in view of Wallerius in order to avoid extensive floor-level work and thereby cutting labor and cost significantly.

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15. Claim 87 is rejected under 35 U.S.C. 103(a) as being unpatentable over Drakopoulos in view of Wallerius as applied to claim 79 above, and further in view of Engira (5,152,584).

Drakopoulos in view of Wallerius discloses all the claim limitations as stated above, except for transmitting real time electrocardiograph waveform data of patients to the wired computer network.

Engira teaches an ECG telemetry system incorporating a patient location system and a method of monitoring physiological status of the patient (column 1, lines 50-column 2, line 26).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the teachings from Engira of transmitting real time electrocardiograph waveform data in the system of Drakopoulos in view of Wallerius in order to locate ambulatory patients experiencing arrhythmic episodes and monitoring physiological status of the patient (column 2, lines 3-9).

### ***Conclusion***

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Connolly et al. (US 5,657,375) discloses a wireless digital personal communication system.

Toshiyuki et al. (US 5,093,924) discloses channel-assigning method in a mobile communication system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saba Tsegaye whose telephone number is (571) 272-3091. The examiner can normally be reached on Monday-Friday (7:30-5:00), First Friday off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on (571) 272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ST

January 19, 2007



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SUPERVISORY PATENT EXAMINER  
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